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10/611,779	06/30/2003	Andrew J. Carroll	020431.1304	1881

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EXAMINER

LEE, PHILIP C

ART UNIT	PAPER NUMBER
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2152

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/611,779

Applicant(s)

CARROLL ET AL.

Examiner

Philip C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/30/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-53 are presented for examination.

Claim Rejections – 35 USC 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-17, 52, and 53 are rejected under 35 U.S.C. 101 because “A system” comprising a server and interfaces (i.e., software) does not include any functional structure of a system. A system (i.e., apparatus) comprising a server and interfaces (i.e., software) is considered as program per se, which is not one of the categories of statutory subject matter.
4. Claims 18-34 are rejected under 35 U.S.C. 101 because “A method for executing bulk data transfers” giving its broadest interpretation can be considered as a “software program for executing bulk data transfer” and it does not produce a useful, concrete and tangible result.
5. Claims 35-51 are rejected under 35 U.S.C. 101 because “Software for executing bulk data transfers” does not produce a useful, concrete and tangible result and software is considered as program per se, which is not one of the categories of statutory subject matter.

Claim Rejections – 35 USC 112

6. Claims 1-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim language in the following claims is not clearly understood:
 - i. As per claim 1, lines 13-14, it is unclear if “a bulk data transfer” in lines 13-14 refers to “a bulk data transfer” in lines 6-7 [i.e., if they are the same, then “the bulk data transfer” or “said bulk data transfer” must be used]; Lines 15-16, it is unclear if “one or more data entities” refers to “one or more data entities” in lines 8-9; Line 18, it is unclear if “each programmatic interface” refers to “one or more programmatic source interfaces” in line 4 or “one or more programmatic target interfaces” in 11; Lines 19, 21, 22, 25, and 26-27, it is uncertain if “the corresponding data store” refers to “the corresponding source data store” in line 8 or “the corresponding target data store” in line 15; Line 27, it is unclear if “any other particular data stores” refers to “any other particular data stores” in line 22.
 - ii. As per claim 12, line 2, it is unclear if “each programmatic interface” refers to “one or more programmatic source interfaces” in line 4 of claim 1 or “one or more programmatic target interfaces” in 11 of claim 1.
 - iii. As per claim 18, lines 14-15, 16-17, 19, 20, 22-23, 26 and 28, they have the same problem as claims 1 above.

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- iv. As per claim 29, lines 2 and 3, they have the same problems as claim 12 above.
- v. As per claim 35, lines 14-15, 16-17, 19, 20, 22-23, 26, and 27-28, they have the same problems as claim 1 above.
- vi. As per claim 46, lines 2 and 3, they have the same problems as claim 12 above.
- vii. As per claim 52, lines 15, 17, 19, 20, 22, 23, 26, and 27-28, they have the same problems as claim 1 above.
- viii. As per claim 53, lines 17-18, 19-20, 22, 23, 24, 25, 26, 29, and 30-31, they have the same problems as claim 1 above.

Claim Rejections – 35 USC 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1-2, 10-12, 18-19, 27-29, 35-36, 44-46 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram).

10. As per claims 1, 18, 35 and 52, Jayaram teaches the invention as claimed comprising:
a data integration server coupled to one or more persistent data stores (fig. 1, col. 10, lines 56-63);
one or more programmatic source interfaces, each being associated with a corresponding source data store, defined according to a common programmatic source interface specification (col. 11, lines 1-5), and exposed within the data integration server during a bulk data transfer in connection with an enterprise-level business workflow (abstract) to enable the data integration server to extract from the corresponding source data store one or more data entities for loading into any one or more selected target data stores during the bulk data transfer (col. 11, lines 5-11); and
one or more programmatic target interfaces, each being associated with a corresponding target data store, defined according to a common programmatic target interface specification (col. 11, lines 5-11), and exposed within the data integration server during a bulk data transfer in connection with an enterprise-level business workflow (abstract) to enable the data integration server to load into the corresponding target data store one or

more data entities extracted from any one or more selected source data stores during the bulk data transfer (col. 11, lines 5-11);

each programmatic interface: providing to the corresponding data store an abstraction of bulk data transfer operations within the data integration server such that custom code need not be developed in connection with the corresponding data store to enable bulk data transfers between the corresponding data store and any other particular data stores (col. 12, lines 35-38); and

isolating from the data integration server specific details associated with the corresponding data store such that custom code need not be developed in connection with the data integration server to enable bulk data transfers between the corresponding data store and any other particular data stores (col. 16, lines 42-52).

11. As per claims 2, 19, and 36, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach the data integration server is operable to expose its bulk data transfer operations as services to applications or other systems (col. 10, lines 42-49) within an enterprise-level infrastructure and to execute a bulk data transfer operation in response to a request from such an application or other system (col. 10, lines 58-63).

12. As per claims 10, 27, and 44, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach a particular data store may be a source data store or a target data store for a particular bulk data transfer depending on whether data entities are extracted

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from the particular data store or loaded into the particular data store during the particular bulk data transfer (inherent in col. 2, lines 15-20).

13. As per claims 11, 28, and 45, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach loading data entities comprises inserting, updating, or deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a target system).

14. As per claims 12, 29, and 46, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Jayaram further teach within each programmatic interface, one or more resources representing data entities contained in the corresponding data store are defined (col. 14, lines 18-22); and the data integration server is operable to, in response to a request to execute a bulk data transfer involving one or more resources contained in one or more data stores (col. 10, lines 56-63), create each programmatic interface within which at least one of the resources is defined (col. 14, lines 26-28).

Claim Rejections – 35 USC 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 16-17, 33-34 and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram.

17. As per claims 16, 33, and 50, although Jayaram teaches one or more transformation interfaces exposed within the data integration server (col. 10, lines 64-67), each transformation interface: comprising one or more programmatic interfaces defined within the transformation interface (col. 16, lines 24-26); comprising custom transformation logic to be applied to data entities extracted from one or more source data stores in a bulk data transfer, using the one or more corresponding programmatic source interfaces (col. 16, lines 30-41), before the extracted data entities are loaded into one or more target data stores in the bulk data transfer, using the one or more corresponding programmatic target interfaces (col. 16, lines 30-41); and the data integration server is further operable to, in connection with creating the programmatic interfaces, create each transformation interface within which at least one of the programmatic interfaces is defined for application of the associated custom transformation logic in the bulk data transfer (col. 16, lines 24-41), however, Jayaram does not specifically teach isolating transformation logic from defined programmatic interfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention was made that the transformation logic can be coded separately from logical relationship (i.e., programmatic interfaces) because by doing so it would be easier to develop separate segments of codes in a complex software system.

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18. As per claims 17, 34, and 51, Jayaram teaches the invention as claimed in claim 16, 33, and 50 above. Jayaram further teach a controller (inherently comprised) supported within the data integration server and operable to use a transformation interface in executing an individual bulk data transfer without using a commercially available Extract-Transform-Load (ETL) tool in connection with the bulk data transfer (col. 10, lines 24-67) (note that ETL is not used in the conversion engine).

19. Claims 3, 20, 37, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Shannon et al, U.S. Patent Application Publication 2002/0046301 (hereinafter Shannon).

20. As per claims 3, 20, and 37, Jayaram does not teach Java interfaces. Shannon teaches Java interfaces ([0031] and claim 5).

21. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Shannon because Shannon teaching of Java interfaces would provide a greater ease of integration by allowing data to be mapped from one application to another application.

22. As per claim 53, it is rejected for the same reason as claims 1, 2, 16, and 17 above.

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23. Claims 4-6, 8, 21-23, 25, 38-40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter Casagrande).

24. As per claims 4, 21, and 38, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the corresponding programmatic interface to enable extraction of the data from or loading of the data into the data store (col. 14, lines 26-28); and for data extraction, as the programmatic source interface produces the data extracted from the data store, send the outgoing data; or for data loading, as the data arrives, send the incoming data to the programmatic target interface for loading into the data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard interface and industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67); receive a request from a client indicating that the client is extracting data from or loading data into a data store in accordance with the industry standard protocol (col. 3, lines 48-51); and send the outgoing data to the client in accordance with the industry standard protocol (col. 3, lines 1-4).

25. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande

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teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

26. As per claims 5, 22, and 39, Jayaram and Casagrande teach the invention substantially as claimed in claims 4, 21, and 38 above. Jayaram further teach the data integration server allows a client supporting an industry standard protocol for bulk data transfers to perform bulk data transfers with respect to an existing data store using a programmatic interface whether or not the existing data store or an associated existing application itself supports bulk data transfers in accordance with the industry standard protocol (col. 10, lines 43-63; col. 11, lines 23-27).

27. As per claims 6, 23, and 40, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable extraction of the data from the corresponding source data store (col. 14, lines 26-28); and as the programmatic source interface produces the data extracted from the corresponding source data store, send the outgoing data (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration server that the FTP client is downloading a stream of data from the corresponding source data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the interface produces the stream of data

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extracted from the corresponding source data store, send the outgoing stream of data to the FTP client in accordance with FTP (fig. 4, col. 3, lines 1-4).

28. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

29. As per claims 8, 25, and 42, Jayaram teaches the invention as claimed in claim 1 above. Although Jayaram teaches a programmatic source interface may be exposed within the data integration server supporting bulk data transfers (col. 11, lines 1-5); and the data integration server is operable to: create the programmatic source interface to enable loading of the data into the corresponding source data store (col. 14, lines 26-28); and as the data arrives, send the incoming data to the programmatic target interface for loading into the corresponding target data store (col. 11, lines 1-11), however, Jayaram does not teach industry standard File Transfer Protocol (FTP) interface and FTP industry standard protocol. Casagrande teaches a FTP interface supporting data transfer according to an FTP industry standard protocol (fig. 4, col. 8, lines 60-67); and allow an FTP client to open an FTP connection informing the data integration server that the FTP client is uploading a stream of data to the corresponding target data store (col. 6, lines 10-15; col. 9, lines 58-60); and as the stream of data arrives from the FTP client in accordance with FTP, send the outgoing stream of data into the data store (fig. 4, col. 3, lines 1-

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4) (i.e., the server of fig. 4 is interpreted as the FTP client and FTP client 12 and 24 of fig. 4 is the interpreted as the data store).

30. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Casagrande because Casagrande teaching of industry standard protocol interface would enhance and make it easier for Jayaram's system to transfer data between data stores using well known protocol such as FTP.

31. Claims 13-15, 30-32 and 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram in view of Walsh et al, U.S. Patent Application Publication 2003/0233249 (hereinafter Walsh).

32. As per claims 13, 30, and 47, Jayaram teaches the invention as claimed in claims 1, 18, and 35 above. Although Jayaram teach connect to data stores (fig. 1), whether or not the tool is compatible with these data stores, using the corresponding programmatic interfaces to extract data entities from and load data entities into these data stores (col. 11, lines 1-11), however, Jayaram does not teach ETL tool. Walsh teaches connect directly to data stores (fig. 1) with which the ETL tool is compatible to extract data entities directly from and load data entities directly into these data stores ([0092]).

33. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram and Walsh because Walsh's teaching

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of ETL tool would enhance the transfer mechanism in Jayaram's system by providing extraction of data from a data source, transformation of the data if necessary, consolidation of the data, and loading of the data into the target data store.

34. As per claims 14, 31, and 48, Jayaram and Walsh teach the invention as claimed in claims 13, 30, and 47 above. Although Jayaram teach the data integration server is operable to use programmatic interfaces to support compatibility between any corresponding data store (col. 2, lines 56-60), however, Jayaram and Walsh do not teach to support compatibility between any commercially available ETL tool. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to support ETL tool or any type of tools for the data stores in order to provide a data store independent system allowing data conversion from any source data stores into any target data stores.

35. As per claims 15, 32, and 49, Jayaram and Walsh teach the invention as claimed in claims 14, 31, and 48 above. Jayaram further teach the data integration server supports a controller operable to execute individual bulk data transfers using programmatic interfaces where either: an Extract-Transform-Load (ETL) tool is not present (col. 3, lines 16-24) (i.e., ETL is not present in the conversion engine); or an ETL tool is present but its capabilities are not needed to transform data entities extracted from one or more source data stores, using the one or more corresponding programmatic source interfaces, before the extracted data entities are loaded into one or more target data stores, using the one or more corresponding programmatic target

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interfaces, because physical database schemas of the source and target data stores are at least substantially similar.

36. Claims 7, 9, 24, 26, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Casagrande in view of Walsh.

37. As per claims 7, 9, 24, 26, 41, and 43, Jayaram and Casagrande teach the invention substantially as claimed in claims 6, 8, 23, 25, 40, and 42 above. Jayaram and Casagrande do not teach Extract-Transform-Load (ETL) tool. Walsh teaches a commercially available Extract-Transform-Load (ETL) tool supported within the data integration server ([0089], [0092]).

38. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Jayaram, Casagrande, and Walsh because Walsh's teaching of ETL tool would enhance the transfer mechanism in Jayaram's and Casagrande's systems by providing extraction of data from a data source, transformation of the data if necessary, consolidation of the data, and loading of the data into the target data store.

CONCLUSION

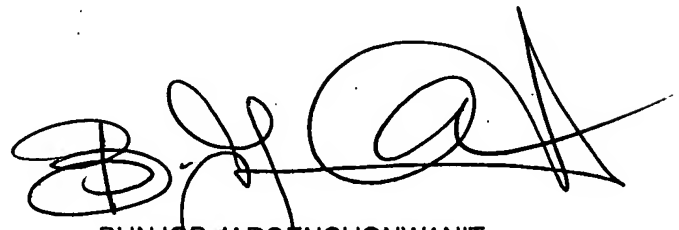
39. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jennyc et al, US 6334158; Cox et al, US 2005/0223392.

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40. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

P.L.



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SUPERVISORY PATENT EXAMINER